



Environmental Health & Safety
University of Missouri-Columbia

Research Park Development Building
Columbia, MO 65211-3050

PHONE (573) 882-7018

FAX (573) 882-7940

HAZARDOUS MATERIALS MANAGEMENT 882-7018

INDUSTRIAL HYGIENE SERVICES 882-7018

RADIATION SAFETY OFFICE 882-7221

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OSWER Docket
EPA Docket Center
Environmental Protection Agency
Mailcode: 5305T
1200 Pennsylvania Ave NW
Washington, DC 20460

Re: Docket ID #: RCRA 2003-0012

I am sure I speak for many when I say I very much appreciate EPA holding a public stakeholder meeting on management of hazardous wastes in research and/or academic laboratories.

Before responding to the questions identified in the Federal Register Notice, some background information may be helpful in putting my comments in context. I was responsible for RCRA compliance for the University of Illinois at Urbana-Champaign (UIUC) for over 17 years beginning in 1981. In 1999, I became Director of Environmental Health and Safety, which oversees RCRA compliance, at the University of Missouri-Columbia (MU). My office has identified over 800 locations at MU where hazardous materials are used or stored. Many of these locations involve multiple rooms. If one assumes 3-4 workers per location, there are several thousand persons handling hazardous materials on campus. I don't have comparable numbers for UIUC, but that campus is approximately 50% larger than MU. Compliance with RCRA has been a challenge in academic institutions for reasons well known to the EPA. We have wrestled with the issues being addressed in this docket for many years. My comments are based on these experiences with the intent of providing workable solutions to meet the intent of RCRA.

General Comment

Comment 1. Should there be any change to the regulations applicable to academia, make them optional as an alternative to the existing regulations. Although academic institutions share many common traits, each institution is unique in terms of programs and resources. Some academic institutions would prefer that there be no change to RCRA regulations because they have devised hazardous waste management programs that work for them and which comply with the regulations as they now exist. These institutions should not be forced to change to a new system that will "make their lives easier." On the other hand, many institutions look forward to the prospect that EPA is considering alternatives to current regulations.

Specific Comments

Issue: Hazardous waste determination

Question: When should a hazardous waste determination be made in a laboratory setting?

Answer and Comment 2. The hazardous waste determination should not be made in a laboratory setting. The important issues are that the public and the environment be protected from improper handling and disposal of hazardous materials. Universities have developed programs to provide safe handling and disposal of hazardous materials, and to comply with government regulations. These

programs place significant restrictions on the disposal of wastes via the sewer or ordinary trash—in some cases, these disposal methods are prohibited altogether. Instead, the programs usually require that unwanted hazardous materials be handled by trained staff at a special management facility. A hazardous waste determination clearly needs to be made before the wastes leave campus, but I see little benefit for a determination to be made before the unwanted hazardous materials reach the institution's hazardous materials management facility. Clearly, the unwanted hazardous materials need to be identified at least to hazardous characteristics; however, knowing that an unwanted hazardous material is a regulated hazardous waste does not give the material handlers any information that might improve the safety of intracampus transport of these materials. An additional consideration is that while laboratory personnel are able to determine that they have no further use for a hazardous material; they are often not able to determine if anyone else might have a beneficial use for their unwanted hazardous material. Indeed, many campuses have redistribution programs that take unwanted hazardous materials and make them available to others on campus. These redistribution programs reduce the amount of hazardous material purchased (and eventually disposed) and save the institutions money on both purchase and disposal costs. To prevent sham recycling, the institution should have written policies about what materials would be accepted into the redistribution program and under what conditions these materials would be removed from storage and disposed as waste.

Question: What training is needed for lab personnel concerning hazardous waste determinations (e.g. full RCRA training or training that is made specific to chemical management duties)?

Answer and Comment 3. Laboratory personnel need to be trained on their role in the institution's hazardous materials management program. I am surprised that EPA is even raising this issue. It is logistically difficult and a waste of resources to train the thousands of laboratory personnel on campus who may produce hazardous wastes to understand all the nuances of the RCRA regulations pertaining to hazardous waste determinations. As long as the institution has a program that gives a high degree of confidence that hazardous materials will not be disposed improperly, EPA shouldn't care who is performing the hazardous waste determination. If an institution has a policy that all unwanted chemicals—regardless of hazard—are to be turned over to the Environmental Health and Safety office for proper management, why should laboratory personnel need to understand the RCRA regulations on hazardous waste determinations? It makes more sense from a compliance standpoint and an efficient use of resources to require that appropriate members of the Environmental Health and Safety staff have such training.

Question: How should waste be labeled so that it can be appropriately managed as hazardous waste (e.g. the words "hazardous waste" or a detailed chemical description)?

Answer and Comment 4: Laboratory workers are not capable of determining if their unwanted hazardous materials are actually "waste." They are only capable of determining that they don't want these materials any more. Laboratory workers should label unwanted hazardous materials with a detailed chemical description. In concept, laboratory workers do not generate waste, only unwanted materials. As noted in Comment 2, laboratory workers are not always aware of potential uses for their unwanted hazardous materials. To encourage recycling, unwanted hazardous materials should not be classified as waste until possible reuse options are pursued. Because unwanted hazardous materials pose potential hazards to the persons who handle these containers, the unwanted hazardous materials containers must be labeled with adequate information to allow hazard assessments to be made. For unwanted unused hazardous materials in the manufacturer's original container, the original manufacturer's label is the most appropriate labeling and should be preserved. For unwanted used hazardous materials as well as unwanted unused hazardous materials not in their original container, a label that describes the contents as well as the hazards is needed. If unwanted hazardous material is later determined to be a waste, this more descriptive label information will contribute to the performance of a hazardous waste determination. The words, "hazardous waste," are of no value in determining the hazards of an unwanted hazardous material.

Question: Where should the hazardous waste determination be made (e.g. on the bench, or in the 90 to 180 day storage facility)?

Answer and Comment 5: The hazardous waste determination should be made in the 90 to 180 day storage facility. As noted in earlier comments, for efficient use of resources and to encourage recycling, the determination should be made in the storage facility. Although many unwanted hazardous materials from laboratories are subsequently determined to be hazardous waste, there is no benefit to training all laboratory workers on RCRA regulations so that a hazardous waste determination can be made in the laboratory provided that the containers are properly labeled. As noted above there are significant benefits to focusing RCRA training on a small number of environmental health and safety staff so that recycling options can be fully exploited and the costs of training minimized.

Issue: Satellite Accumulation Area (SAA) Accumulation Time. If more than 55 gallons of hazardous waste or more than 1 quart of acute hazardous waste is accumulated at a SAA, the excess must be removed within 3 days.

Question: How should these requirements be applied in a laboratory context?

Answer and Comment 6: Each institution should address the issue of the amount of unwanted hazardous material that may be accumulated in a laboratory. Academic laboratories are almost always short on adequate space. There should be no problem limiting the accumulation of unwanted hazardous materials to quantities that are consistent with current RCRA regulations.

Question: How often do laboratories accumulate more than 55 gallons of waste in their SAA?

Answer and Comment 7: Never. As noted above, laboratories accumulate unwanted hazardous materials, but they are not capable of determining that a material is a waste. In my experience, it is highly unusual for a laboratory to accumulate more than 55 gallons of unwanted hazardous materials and all institutions would want to discourage this for safety reasons.

Question: What, if any, difficulties do environmental health and safety personnel have responding to waste pickup calls, e.g., within the three day time limit?

Answer and Comment 8: The main difficulties are using environmental health and safety staff time efficiently. Few pickup requests from laboratories exceed 55-gallons. Most of these are due to a researcher moving to a different laboratory or leaving the university. Laboratory workers often want their unwanted hazardous materials picked up immediately. Such service is difficult to provide efficiently. At MU, my staff typically responds to 200 pickup requests, consisting of over 1000 separate containers each month. As a result, we promise collection within 2 weeks, but have a goal of servicing the request within a week of receipt. We place higher priority on pickup requests that exceed 55-gallons which has not proven to be a burden.

Question: How would a longer time for removal impact the cost of waste management and the ability to protect human health and the environment?

Answer and Comment 9: A longer time for removal of unwanted hazardous materials from laboratories would reduce waste management costs with negligible impact on human health and the environment. The 3-day time frame is too short for institutions to make efficient use of their environmental health and safety personnel. A more reasonable time frame would be 10 working days, which would accommodate the 1-2 week pickup request processing time frames typical of institutional hazardous materials management programs. Changing the requirements from 3 days to 10 working days would have no impact on the environment and negligible impact on human health.

Issue: Treatment in SAAs: We have heard from numerous stakeholders that they would like to perform certain types of treatment.

Question: What types of treatment, other than neutralization, are laboratory personnel performing or would they like to perform.

Answer and Comment 10: Deactivation of reactive chemicals and distillation. In my experience, laboratory personnel are not often interested in treating their unwanted hazardous materials. When they are interested in treatment, it is to make the unwanted hazardous materials less hazardous or easier to handle. This is particularly important to consider when the Department of Transportation regulations require highly specialized packaging, handling, and/or transportation. Stabilization for transport should be an allowed form of treatment. Such “treatment” does not usually result in any changes to the hazardous waste determination. In other words, all of the applicable hazardous waste identification codes (RCRA codes) are retained. Such stabilization will increase safety, better protect human health and the environment, and reduce transportation and disposal costs. A secondary issue is recovery of solvents through distillation. Possible regulatory constraints are sometimes seen as a barrier to this procedure. For smaller academic institutions, treatment of laboratory wastes may have a greater economic benefit because they do not realize the economies of scale in disposal costs experienced by larger institutions such as MU.

Questions: What would be the benefits of such types of treatment?

Answer and Comment 11: The primary benefit is reduction in hazards of the material. A secondary possibility is recovery for reuse. See Comment 10.

Comment 12: Treatment of laboratory quantities of wastes should be permitted at an institution’s hazardous waste management facility even if performed by staff other than those who actually generated the unwanted hazardous material. Treatment of small quantities of such materials by trained staff, under controlled conditions could significantly reduce disposal costs for small institutions and have a positive economic benefit for larger institutions interested in pursuing this option. Treatment at the institution of generation would reduce hazards associated with transportation and have a positive environmental benefit.

Issue: Other issues specific to research and academic laboratories.

Comment 13: There should be a provision to allow for infrequent, short term storage of small numbers of containers for longer than 90 days without the requirement of obtaining a Part B permit. The large number and variety of containers that eventually become hazardous waste make the logistics of complying with 90 day storage requirements 100% of the time difficult. Most large universities did not even attempt to meet the 90 day limit and instead obtained Part B permits for storage only in the early 1990s. More recently, some of these institutions are now trying to meet the 90 day limit and have dropped their Part B permits. It would be helpful to have some provision to account for the fact that for large institutions it is very tough to guarantee that 100% of the containers are shipped off within 90 days of going into storage. It is not a good use of university or EPA resources to require Part B permits because a small number of small containers (e.g., mixed waste) cannot be shipped within the 90 day limit.

Comment 14: Clarify that multiple identification numbers are not needed for campuses that are divided only by public roads. Some of us thought that this issue had been settled several years ago when the military munitions rule came out in 1997 (62 FR 6621). Apparently there is still some question about this. Requiring multiple identification numbers for a campus merely because it is intersected by public roads serves only to increase paperwork and increase loopholes for institutions to get out of more stringent regulatory compliance requirements.

Summary and Conclusion

As can be seen from my comments, I believe that EPA’s wording of the questions has caused unfortunate regulatory determinations to be made. Of most significance is whether laboratory workers generate

“waste.” I have consistently referred to these “things” as unwanted hazardous materials to make this point. Laboratory workers do not generally understand the regulatory significance of calling a material a “waste.” Nor do I see any useful purpose for training thousands of laboratory workers on the nuances of RCRA regulations. The purpose of RCRA is to protect public health and the environment. University hazardous waste management programs are designed to do this, and most take a more conservative view of hazards than required by RCRA because they arrange for disposal of many nonregulated (albeit hazardous) chemicals as if they were hazardous waste. If laboratory workers are trained to give all their unwanted hazardous materials—regardless of hazard—to the campus environmental health and safety office for proper management, I don’t see why the laboratory workers need to understand anything about RCRA. From a practical point of view, it is easier for the institution to assure that a small number of staff fully understand the regulations than to assure that thousands of employees marginally understand those regulations.

Thank you for consideration of these comments. Should you desire additional inform, I can be reached by email at <ashbrookp@missouri.edu>.

Sincerely,

Peter C. Ashbrook, Director